

REMARKS

In the Office Action mailed April 8, 2005, the Examiner:

- Objected to: the drawings under 37 C.F.R. 1.83(a) for not showing “the frame inside the headrest”;
- Rejected claims 1-3 under 35 U.S.C. § 112 for indefiniteness;
- Rejected claims 1-3 under 35 U.S.C. § 102(b) as being anticipated by *Ruckert* et al (“*Ruckert*” USPN 6,019,424);
- Rejected claim 4 under 35 U.S.C. § 103(a) as being unpatentable over *Elquadah* et al (“*Elquadah*” USPN 6,033,017) in view of *Mester* (“*Mester*” USPN 1,251,079); and
- Rejected claims 4-6 as being unpatentable over *Sherman* (“*Sherman*” USPN 3,594,037) in view of *Mester* (“*Mester*” USPN 1,251,079).

Except for claims 1 and 2, in which the Applicant has corrected a typographical and grammatical error, respectively, the claims remain in their original form and the Applicant respectfully presents arguments for their allowance.

Drawings

The Examiner has objected to: the drawings under 37 C.F.R. 1.83(a) for not showing “the frame inside the headrest.” Accordingly, the Applicant hereby submits a new Figure 1 showing “the frame inside the headrest” to correct the noted objection. A marked up Figure 1 is also provided for ease of reference. No new matter has been added. In light of the above, it is respectfully submitted that this rejection has been addressed.

Claim Rejections – 35 U.S.C. § 112

The Examiner has rejected claims 1-3 under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter because “the side” in claim 1 line 9 has insufficient antecedent basis. Claim 1 as been now amended such that it reads “a side” rather than “the side.” In light of this amendment, it is respectfully submitted that this rejection has also been addressed.

Claim Rejections – 35 U.S.C. § 102

The Examiner has rejected claims 1-3 under 35 U.S.C. § 102(b) as being anticipated by *Ruckert* et al (“*Ruckert*” USPN 6,019,424). This set of claims contains one independent claim, namely claim 1. It is well established law that for a proper showing that these claims

are anticipated by *Ruckert* all elements of each rejected claim must be disclosed in the cited reference. With respect to the rejection of claims 1-3 as being anticipated by the *Ruckert* reference, the Applicant respectfully traverses this rejection for at least the following reasons.

Independent claim 1 requires “a plurality of elastic connecting means that elastically couple said headrest supporting frame and said seatback frame.” (Claim 1, lines 8-9). *Ruckert*, however, discloses “a stored energy spring 20.” (Col. 3, lines 39-40). In other words, *Ruckert* discloses a single spring. Thus, *Ruckert* does not disclose a the plurality of elastic connecting means distinguishes the present invention from which discloses only one elastic connecting means. For this reason alone, independent claim 1 cannot be anticipated by *Ruckert*, as *Ruckert* does not disclose each and every limitation of independent claim 1.

Moreover, *Ruckert*’s spring is coupled between the backrest 3 and the headrest carrier 17, not between a headrest supporting frame and a seatback frame. In fact *Ruckert* does not disclose, teach, or suggest a seatback frame distinct from a seatback itself. Again, for this reason alone, independent claim 1 cannot be anticipated by *Ruckert*, as *Ruckert* does not disclose each and every limitation of independent claim 1.

Furthermore, independent claim 1 requires the current invention discloses “a headrest adjusting bar that adjusts the height of a headrest, the headrest adjusting bar being perpendicularly bent for connecting to the headrest through a side of the headrest.” (Emphasis added. Claim 1, lines 10-12). As can be seen in Figure 1 of *Ruckert*, the “angled headrest carrying arm” (Col 3, lines 50-51) “bears the headrest” (Col 3, line 52) from below. In other words, the adjusting bar disclosed in *Ruckert* is attached to the bottom of the headrest rather than through the side, as is required by claim 1. For this reason alone, independent claim 1 cannot be anticipated by *Ruckert*, as *Ruckert* does not disclose each and every limitation of independent claim 1.

Moreover, independent claim 1 requires “a headrest supporting frame having a lower end secured to a recliner and an upper end provided with an insert hole.” (Claim 1, lines 4-5). *Ruckert* does not disclose any such “headrest supporting frame.” (Claim 1, line 4). Rather, the Examiner relies on the “shaft 18” (Col 3, line 30) as the headrest supporting frame. The shaft 18 is described as being the top region of the backrest 3. (Col 3, line 29). As shown in Figure 1, the shaft is a part a multi-bar mechanism used to move the seatback. Accordingly, the shaft cannot be said to be the headrest supporting frame that is required by claim 1. Again, for this reason alone, independent claim 1 cannot be anticipated by *Ruckert*, as *Ruckert* does not disclose each and every limitation of independent claim 1.

Furthermore, independent claim 1 requires “a headrest supporting frame having a lower end secured to a recliner.” (Emphasis added. Claim 1, lines 4). However, *Ruckert* does not disclose, teach, or suggest any such is no recliner. Rather, the Examiner relies on the “pin 19” (Col 3, line 35-36) of *Ruckert* as the recliner. The pin, as described in *Ruckert* is for rotating the headrest carrier 17 forward only when the it has been released by the hook 19. (Col 3, lines 35-37). The recliner in the present invention allows the headrest support frame to “control[s] the inclination of the seatback.” (Para 0027, lines 5-6). In other words, the use of the recliner in the current invention is to position the seat occupant at a comfortable position, whereas the use of the pin 19 in *Ruckert* is only for the movement of the seat during a collision. For this reason alone, independent claim 1 cannot be anticipated by *Ruckert*, as *Ruckert* does not disclose each and every limitation of independent claim 1.

Moreover, independent claim 1 requires “a headrest supporting frame having a lower end secured to a recliner and an upper end provided with an insert hole.” (Emphasis added. Claim 1, lines 4-5). *Ruckert* simply does not disclose an insert hole in the headrest supporting frame. Accordingly, *Ruckert* cannot teach the hole element of claim 1 of the current invention. For this reason alone, independent claim 1 cannot be anticipated by *Ruckert*, as *Ruckert* does not disclose each and every limitation of independent claim 1.

Finally, although *Ruckert* discloses an “angled headrest carrying arm 22” (Col 3, lines 50-51), it does not disclose a “headrest adjusting bar that adjusts the height of the headrest” (Emphasis added. Claim 1, lines 10) as required by claim 1. Instead, *Ruckert* describes that the “angled headrest carrying arm 22 can be pivoted.” (Col 3, lines 50-51). A pivoting motion is different from adjusting the height of the headrest.

In light of the above, it is respectfully submitted that *Ruckert* does not disclose, teach, or suggest many of the limitations of independent claim 1. Accordingly, *Ruckert* cannot anticipate independent claim 1 or its dependent claims 2 and 3.

In addition, the tension springs required by claim 2 cannot be said to be the spring 20 of *Ruckert*. As is described in *Ruckert*, “stored energy springs” (Col 3, line 39) must be used to pivot the headrest carrier 17 forward once it is released from the hook 15 (Emphasis added. Col 3, lines 34-40). In the current invention tension springs are used to dampen the movement of the seatback away from the seatback frame rather than to actuate movement. (Claim 2, lines 14-15). Accordingly, dependant claim 2 cannot be anticipated by *Ruckert*, as *Ruckert* does not disclose each and every limitation of the claim.

Furthermore, dependant claim 3 requires that “the upper end of the headrest adjusting bar is connected to a frame inside the headrest” (Claim 3, lines 18-19). *Ruckert* does not disclose a “frame inside the headrest” at all. Claim 3 also discloses that “the lower

end of the headrest adjusting bar is adjustably inserted into the inserting hole formed at the upper end of the headrest supporting frame.” (Claim 3, lines 19-21). *Ruckert* also does not disclose the “inserting hole formed at the upper end of the headrest supporting frame.” In light of the above, it is respectfully submitted that *Ruckert* does not disclose, teach, or suggest many of the limitations of claim 3, and as such, cannot anticipate claim 3.

Claim Rejections – 35 U.S.C. § 103

The Examiner has rejected claim 4 under 35 U.S.C. § 103(a) as being unpatentable over *Elquadah* et al (“*Elquadah*” USPN 6,033,017) in view of *Mester* (“*Mester*” USPN 1,251,079). With respect to the rejection of claim 4 as being obvious over *Elquadah* in view of *Mester*, the Applicant respectfully traverses this rejection for at least the following reasons.

To establish a prima facie case of obviousness, three basic criteria must be met, namely:

1. There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
2. There must be a reasonable expectation of success; and
3. The prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on the Applicant’s disclosure.¹

As stated above, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *Elquadah* and *Mester* fail to teach all of the claim limitations. The current invention discloses “a seatback frame disposed within the headrest supporting frame, independent from said headrest supporting frame, the seatback frame being configured for carrying a vehicle seatback.” The Examiner relies on “the foam base 26 (Col 2, line 24) disclosed in *Elquadah* to teach the “seatback frame.” However, *Elquadah* does not teach both a seatback frame and a separate vehicle seatback. Similarly, *Mester* does not disclose both a seatback frame and a vehicle seatback. The “rear strut 32” (line 111) that the Examiner relies upon for the “back member,” cannot be both the “vehicle seatback frame” and the “vehicle seatback.” Accordingly, neither *Mester* nor *Elquadah* disclose a “seatback frame” separate from a “vehicle seatback.” Therefore, neither *Mester* nor *Elquadah*, alone or in combination, do not teach or suggest all of the claim limitations of claim 4, and as such, cannot render claim 4 obvious.

¹ *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Furthermore, claim 4 also requires “a headrest supporting frame configured at a bottom end for attachment to a seat and at a top end for supporting a headrest.” (Claim 4, lines 24-25). The Examiner relies on the “wings 34” (Col 2, line 13) of *Elquadah* as support for the “headrest supporting frame.” However, the wings 34 do not support the headrest in *Elquadah*, as required by claim 4. Rather the headrest in *Elquadah* “is mounted to the actuator arm 90” (Col 2, line 66). The actuator arm is not directly connected to the wing structure, so, therefore, the wings cannot support the headrest. Furthermore, if the actuator arm 90 were considered the headrest supporting frame rather than the wings 34 *Elquadah* would still fail to meet all of the limitations of claim 4. This is because the actuator arm 90 is not “configured at the bottom end for attachment to a seat” as stated in claim 4. Instead the “actuator arm 90 is fixed to the upper shaft 82” (Col 2, lines 60-61), which, as can be seen in Figure 3 of *Elquadah*, is positioned at the top of the seatback rather than at the seat itself, which is referred to as a “foam base 26” in *Elquadah*. (Col 2 line 24). Therefore, *Elquadah* does not teach or suggest many of the claim limitations of claim 4 because it fails to disclose a headrest supporting frame configured at a bottom end for attachment to a seat and at a top end for supporting a headrest. For this reason alone, independent claim 4 cannot be unpatentable over the combination of *Elquadah* and *Mester*.

Moreover, *Mester* does not teach the “elastic connectors extending between the headrest support frame and the seatback frame to elastically couple the frames together while permitting relative movement there between” (Claim 4, lines 29-30), as required by claim 4. Rather, *Mester* teaches “springs 25 being preferably arranged between the sides 24 and head rest 21.” (Col 2 lines 78-80). As can be seen in Figures 1 and 2 the springs in *Mester* are arranged so as to provide support for an occupant using the device in the chair or bed position. However, the *Mester* springs are not designed to allow movement of the seatback frame (rear strut 32) past the headrest supporting frame (headrest 21) as does the claimed invention. Instead the springs are designed such that the headrest protrudes from the seatback frame. Therefore, the relative movement between the frames as described in claim 4 of the current invention are not taught by the “springs arranged between the sides and the headrest” (Col 2 lines 78-80) of *Mester*. Again, for this reason alone, independent claim 4 cannot be unpatentable over the combination of *Elquadah* and *Mester*.

Finally, as stated above there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. However, neither reference provides any motivation to combine reference teachings. *Elquadah* relates to the design of vehicle safety chairs, while *Mester* relates to a convertible chair technology. One skilled in

the art of designing vehicle safety chairs would not be motivated to look to convertible chair technology in order to improve upon a safety design.

In light of the above, it is respectfully submitted that neither *Mester* nor *Elquadah* teaches or suggests all of the limitations of independent claim 4. Furthermore, there is no suggestion or motivation to modify or to combine reference teachings. For at least these reasons, claim 4 is patentable over *Elquadah* in view of *Mester*.

Moreover, the Examiner has rejected claims 4-6 as being unpatentable over *Sherman* (“*Sherman*” USPN 3,594,037) in view of *Mester* (“*Mester*” USPN 1,251,079). With respect to the rejection of claims 4-6 as being obvious over *Sherman* in view of *Mester*, the Applicant respectfully traverses this rejection for at least the following reasons.

The current invention discloses “a headrest supporting frame configured at a bottom end for attachment to a seat and at a top end for supporting a headrest” (Claim 4, lines 24-25). *Sherman* does not disclose a “top end for supporting a headrest.” (Claim 4, line 25). The “headrest 48” (Col 1, line 37) in *Sherman* hangs inside of the “U-shaped frame 56” (Col 2, line 43-44) which is not directly connected to the “side supports 12 (Col 1, line 67), which the Examiner calls the “headrest supporting frame.” *Sherman* discloses that “the headrest 48 is provided and is adapted to move upwardly when the U-shaped bottom frame 20 is moved downwardly.” (Col 2, lines 37-39). This “is accomplished through a linkage which includes push rods 50 pivotally connected at their lower ends to ears 52 on the extended arms 32.” (Col 2, lines 39-41). It is unclear how exactly the “side supports 12” disclosed in *Sherman* (Col 1, line 67) connect to the headrest. However, it is clear that these “side supports” (Col 1, line 67), which the Examiner calls the “headrest support frame” are not configured at a top end for supporting a headrest.

Furthermore, the “side supports” (Col 1, line 67) which the Examiner calls the “headrest support frame” is not “configured at the bottom end for attachment to a seat” (Claim 4, line 24) as claim 4 requires. The “seat cushion” (Col 1, line 71), which the Examiner calls the “seat” attaches to a “seat bottom frame 20” (Col 1, line 70) at “pivot points 24” (Col 1, line 72), which exist in the middle of the “side supports” (Col 1, line 67), as can be seen in Figure 2. Thus it is apparent that the “side supports” (Col 1, line 67) which the Examiner calls the “headrest support frame” is not “configured at the bottom end for attachment to a seat,” but instead the seat attaches to the middle of the side supports.

Likewise *Mester* does not disclose a “headrest supporting frame configured . . . [at] a bottom end for attachment to a seat and at a top end for supporting a headrest.” (Claim 4, lines 24-25). If the “the rear strut 32” (Col 2, line 111) is said to be “headrest supporting frame” then it is not configured at the top end for supporting the headrest. As one can see

from Figure 1, the “rear strut 32” supports the “headrest 21” in the middle of its length. Therefore, the “headrest supporting frame” or “rear strut 32” (Col 2, line 111) is not configured “at a top end for supporting a headrest.” (Claim 4, line 25). If on the other hand, the “headrest 21” (Col 2, line 76) which the Examiner terms the “headrest member” is considered the “headrest supporting frame,” then it is not “configured at a bottom for attachment to a seat” (Claim 4, line 24), as required by the claim. As can be seen in Figure 1, the “headrest 21” (Col 2, line 76) attaches to the middle of the “rear strut 32” (Col 2, line 111) and is nowhere near the seat of the chair. Therefore, no matter which element in *Mester* is considered to be the “headrest supporting frame” such an element is not “configured at a bottom end for attachment to a seat and at a top end for supporting a headrest.” Therefore neither *Sherman* nor *Mester* teach “a headrest supporting frame configured at a bottom end for attachment to a seat and at a top end for supporting a headrest.” For this reason alone, independent claim 4 cannot be unpatentable over the combination of *Sherman* and *Mester*.

Finally, as stated above, a *prima facie* case of obviousness requires some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Neither reference provides such a motivation. *Sherman* relates to thin profile cabin attendant seats and *Mester* relates to convertible chair technology. Accordingly, one skilled in the art of designing vehicle safety chairs would have no motivation to look to thin profile cabin attendant seat technology in combination with convertible chair technology to improve upon a vehicle seat safety design. In other words, convertible chair technology is so unrelated to cabin attendant seat technology and neither technology is similar to vehicle safety seat technology. A person skilled in the art of vehicle seat technology would not be motivated to look to either convertible chairs or cabin attendant seats to improve the design of a vehicle seat against neck injury. In addition, the described convertible chairs are not used in vehicles and cabin attendant seats generally face backwards and do not have the same issues related to protecting a forward facing passenger against neck injury.

In light of the above, it is respectfully submitted that neither *Mester* nor *Sherman* teaches or suggests all of the limitations of independent claim 4 and its dependent claims 5 and 6. Also, there is no suggestion or motivation to modify the references or to combine reference teachings. For at least these reasons independent claim 4 and its dependent claims 5 and 6 are patentable over *Sherman* in view of *Mester*.

Furthermore, Claim 5 is not separately unpatentable over *Sherman* and *Mester*. Claim 5 discloses: “The vehicle seat of claim 4, wherein said headrest supporting frame

comprises: left and right upright members; adjustment members mounted atop each upright member to define adjusting holes; and a headrest adjustment bar received in said holes and extending between said upright members, the headrest adjustment bar being configured to carry a headrest and vertically adjustable with respect to the seat.” (p.7, lines 31-33 and p.8, lines 1-4). *Mester* discloses no “left and right upright members,” “adjustment members,” “adjusting holes,” or a “headrest adjustment bar.” Rather, *Mester* discloses only a “headrest 21” (Col 2, line 76) supported by “springs 25” (Col 2, lines 78-79).

Likewise, *Sherman* does not disclose all of the elements for claim 5. Although *Sherman* discloses a headrest that “moves up and down” (Col 2, line 46) the movement is achieved through guide pins 60 oriented in slanted slots 58. (Col 2 lines 37-50). Accordingly, *Sherman* does not teach “adjustment members mounted atop each upright member” (Claim 5, line 33). *Sherman* also does not teach “a headrest adjustment bar that is configured to carry a headrest.” Neither the description nor the Figures of *Sherman* disclose any bar to carry the “headrest 48” (Col 2, line 37).

In light of the above, it is respectfully submitted that *Sherman* by itself or in combination with *Mester* does not disclose, teach, or suggest all of the limitations of claim 5. As such, claim 5 is patentable over the combination of *Mester* and *Sherman*.

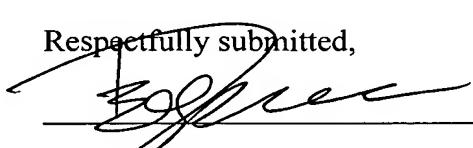
Furthermore, claim 6 discloses, “the vehicle seat of claim 4, wherein said elastic connectors comprise tension springs.” (Emphasis added. Claim 6, lines 6-7). In the current invention “tension springs” are taught. Springs are not taught in *Sherman*. As is apparent in Figures 1 and 2 of *Mester*, compression springs must be used to support the headrest and to make the headrest “slightly resilient” (Col 2, line 92-93). Therefore, the springs in *Mester* are not equivalent to the springs taught in claim 6 of the current invention.

In light of the above, it is respectfully submitted that *Mester* by itself or in combination with *Sherman* does not disclose, teach, or suggest all of the limitations of claim 6. Accordingly, claim 6 is patentable over the combination of *Mester* and *Sherman*.

In view of the foregoing remarks and amendments, it is believed that the application as a whole is in form for allowance. Should the Examiner have any continuing objections, the Examiner is respectfully asked to contact the undersigned at (650) 843-7519 in order to expedite allowance of the case. Authorization is granted to charge any outstanding fees due at this time for the continued prosecution of this matter to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (matter no. 060943-0043).

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Respectfully submitted,

 45,645

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Annotated Marked-up Drawing



Fig. 1

